SECTION II—REMARKS

Applicants thank the Examiner for a thorough review, and respectfully request

reconsideration of the above referenced patent application for the following reasons:

Claims 21-27 rejected under 35 U.S.C. § 101

The Office Action rejected claims 21-27 under 35 U.S.C. § 101 as being directed toward

"non-statutory subject matter."

Applicants respectfully submit that claims 21-27 are canceled herein without prejudice,

and thus, the rejection to claims 21-27 is rendered moot. However, new claims 51-58 recite

similar limitations. In particular, new independent claim 51 recites "a means for receiving," in

addition to other means, such as "a means for unpacking" and "a means for executing."

The Office Action alleges that "one could ... reasonabl[y] interpret the applicant[s']

system comprising a 'means for receiving' ... as **software per se.**" Refer to the Office Action at

pate 3, first paragraph (emphasis added). The Office Action relies upon Applicants' teachings

from paragraph [0057] of the specification for its assertion, those teachings recite in pertinent

part:

> [00057] Turning now to FIGs. 14-32, the particular
> methods associated with embodiments of the invention are
> described in terms of computer software and hardware with
> reference to a flowchart. **The methods to be performed** by a
> computing device (e.g., an application server) **may constitute
> state machines or computer programs made up of computer-
> executable instructions**. ... .

The Office Action does not cite any authority upon which it relies for concluding that a

system having a "means for receiving" could be interpreted as "software per se," however, the

Office Action does argue that, "since the system **is not embodied in a computer readable storage medium** … the invention is rejected under 35 U.S.C. 101."

Applicants respectfully point out, however, that a claim need not recite a "computer readable storage medium" to be directed toward patentable subject matter. It appears that the Office Action contemplates the examination guidelines set forth under M.P.E.P. § 2106.01(I) discussing claims that recite "Functional Descriptive Material." That section states, in pertinent part:

> Data structures not claimed as embodied in computer-readable media **are _descriptive material per se_ and are not statutory** because they are not capable of causing functional change in the computer. … Similarly, computer programs claimed as **computer listings _per se_, i.e., the descriptions or expressions of the programs, are not physical 'things.'**

However, Applicants do not recite "descriptive material" that is "not capable of causing functional change in a computer." To the contrary, Applicants recite subject matter capable of "receiving a Web service archive," "unpacking the Web service implementation … from the Web service archive," and "executing the abstract design-time functionality … within the application server." This is true regardless of whether such functionality is implemented as hardware, software, or in some combination.

The M.P.E.P. expressly states that the "burden is on the USPTO to set forth a _prima facia_ case of unpatentability," and emphasizes that "[d]etermining whether the claim falls within one of the four enumerated categories … **does not end the analysis.**" Refer to M.P.E.P. § 2106 parts B and C. In particular, the USPTO must determine, in accordance with M.P.E.P. § 2106(C)(2)(2), whether the claimed invention is a "practical application that produces a useful, concrete, and tangible result," a judicial exception to 35 U.S.C. § 101. The Office Action does

not provide such analysis, however, in its absence, Applicants provide a brief analysis of new

independent claim 51 under the judicial exception.

<u>Useful, Concrete, and Tangible Result:</u>

In accordance with M.P.E.P. § 2106(2) parts (2)(a) through (2)(c), Applicants

respectfully submit that new independent claim 51, and the claims that depend upon claim 51,

recite a useful, concrete, and tangible result. In particular, new independent claim 51 recites in

pertinent part:

> **An application server**, comprising:
> means for receiving a Web service archive including a Web
> service implementation having abstract design-time functionality
> therein …
> **means for unpacking** the Web service implementation and
> the Web service deployment descriptor from the Web service
> archive into a directory within the application server; and
> **means for executing the abstract design-time
> functionality** … .

The M.P.E.P. states that for a claimed invention to be "useful," it must "satisfy the utility

requirement of section 101." M.P.E.P. § 2106(2)(2)(a). Applicants submit that "means for

unpacking the Web service implementation" at an application server is "useful," as it allows the

functionality therein to be later executed by the application server.

The M.P.E.P. states that for a claimed invention to be "tangible," it must "set forth a

practical application … to produce a real-world result." M.P.E.P. § 2106(2)(2)(b). Applicants

submit that "receiving a Web service archive" and "unpacking the Web service implementation

… from the Web service archive" does produce a "real world result." For instance, one could

look at the directory structure within the application server, and verify that the Web service

implementation was indeed, "unpack[ed] … from the Web service archive."

Finally, the M.P.E.P. states that for a claimed invention to be "concrete," it must "have a

result that can be substantially repeatable or … produce the same result again." M.P.E.P. §

2106(2)(2)(c). Applicants respectfully submit that each time a "Web service implementation" is

"unpack[ed] … from the Web service archive **into a directory structure within the application**

server," the same, consistent, concrete result will be achieved. In particular, practice of the

claimed limitation will result in the "Web service implementation" residing within the directory

structure, every time. Indeed, it would be undesirable for the result to be unpredictable.

Because the limitations that Applicants recite within new independent claim 51 meet the

requirements of the judicial exception of 35 U.S.C. § 101 discussed at M.P.E.P. § 2106,

Applicants respectfully submit that new claims 51-58 are directed toward patentable subject

matter and respectfully request the Examiner to withdraw the rejection to now canceled claims

21-27 and allow new claims 51-58.

Claims 1-34 rejected under 35 U.S.C. § 103(a)

The Office Action rejected claims 1-34 under 35 U.S.C. § 103(a) as being unpatentable

over U.S. Patent Application Publication No. 2003/033369 to Bernhard ("Bernhard") in further

view of U.S. Patent 7,159,224 to Sharma, et al. ("Sharma").

Applicants have canceled claims 1-34 herein without prejudice, and thus, the rejection to

claims 1-34 is rendered moot. However, Applicants respectfully submit that new independent

claim 35 is patentable over the references. For example, new independent claim 35 recites in

pertinent part:

> … receiving a Web service archive including a Web
> service implementation having abstract design-time functionality
> therein, the abstract design-time functionality being independent of
> runtime requirements of the application server, and wherein the
> Web service archive further includes a Web service deployment
> descriptor specifying a mapping of the abstract design-time

functionality to the runtime implementation requirements of the application server;

unpacking the Web service implementation and the Web service deployment descriptor from the Web service archive into a directory within the application server … .

Brief description of the claimed limitations:

To facilitate the expeditious examination and allowance of the claims above, Applicants provide a brief description of some novel aspects of the claimed invention.

Applicants teach in the specification that it may be beneficial to receive a "Web service implementation" and corresponding configuration information at an Application server, rather than having to generate such information. However, conventional Web service archives do not support such capabilities. For example, refer to Applicants' specification teaching:

[0007] The conventional process for deploying a Web service involves **locally generating a Web service implementation and additional deployment information** (e.g., configuration of communication protocols) based on WSDL document 140. In some cases, it may be advantage[ou]s for a computing device **to import a Web service implementation along with the appropriate configuration information**. Conventional Web service archives and deployment services **do not support** importing a Web service implementation along with the appropriate configuration information.

In the specification, Applicants teach receiving a Web service archive that includes a "Web service implementation having **abstract design-time functionality therein**." For example, Applicants teach:

[00018] **Web service implementation 410 is the actual logic behind Web service 400.** … .

[00019] … Web service design time part 420 provides a description of Web service 400 in **terms of abstract features, rather than specific technical implementations**. Thus, the developer of Web service design time part 420 may focus on the logic of Web service implementation 410 rather than the actual

binding information used to expose Web service 400.

* * *

[000104] … The specified function is abstract in that it is **independent of a specific technical implementation**. In an embodiment, the specified behavior may be an authentication function, an authorization function, a session function, a transport guarantee function, and the like.

Applicants further teach in the specification, a "Web service deployment descriptor" providing a configuration for the Web service, for example, by specifying a "mapping of the abstract design-time functionality to runtime implementation requirements of the application server" as claimed. For example, Applicants teach:

[000105] In an embodiment, the Web service deployment descriptor **provides configuration information** that specifies how to implement an abstract Web service definition **on a particular computing device** (e.g., a particular application server). For example, in an embodiment, each Web service deployment descriptor specifies a technical protocol implementation to **implement the abstract functionality described** in a corresponding Web service definition. … .

* * *

[000113] In an embodiment, the Web service implementation … is independent of the transport layer protocol. … Each configuration may specify, for example, a transport binding, **mapping of abstract design-time features to runtime protocol implementations**, security configuration, target address, an the like. … .

Applicants further teach in the specification, "unpacking the Web service implementation and the Web service deployment descriptor from the Web service archive." For example:

[000106] … a Web service is deployed to a container on the application server that received the Web service archive. The term "deploy" refers to **unpacking a Web service archive** and placing the unpacked files in, for example, a directory of an application server. … .

Thus, Applicants teach in the specification, a method for receiving, at an application server, a Web service archive that contains both a "Web service implementation" providing

functionality in an "abstract" format, and a "Web service deployment descriptor" providing configuration mapping information that allows the abstract functionality to be executed at a particular application server. Importing the Web service archive in such a way negates the need to locally generate the Web service implementation, as is done conventionally, but which is not necessarily desirable.

Bernhard and Sharma do not disclose the claimed limitations:

In its rejection of now canceled claim 1, the Office Action alleges that Bernhard discloses "receiving ... a Web service archive" at an application server, and further alleges that Sharma discloses, "a Web service archive" which includes "a Web service implementation ... and a Web service deployment descriptor to describe a configuration of the Web service implementation on the application server."

However, Sharma does not disclose a "Web service archive including a **Web service implementation**" therein, as Applicants recite in new claim 35. Rather, Sharma discloses "packag[ing] specific information within the **WAR file**, including ... a **WSDL document** that **describes the service endpoints**." Refer to Sharma at column 14, lines 13-25. The Office Action indicates that it equates the "WSDL document" of Sharma to the "Web service implementation" claimed by Applicants. Refer to page 4, paragraph 2. Applicants respectfully disagree.

The "WSDL document" disclosed by Sharma is not the same as the "Web service implementation" taught and claimed by Applicants. In particular, Sharma states that a WSDL document describes "service endpoints," whereas Applicants recite in new independent claim 35 that a "Web service implementation ha[s] **abstract design-time functionality therein,** the abstract design-time functionality **being independent of runtime requirements** of the application server." For example, refer to Sharma at column 2, lines 41-48, stating in pertinent

part:

> ... the present invention may allow the computing system to create a **Web Services Description Language (WSDL) document that <u>describes the service endpoint</u>** based on the information contained in the modified archive file and export the WSDL document such that a remote computing system may use the WSDL document to access the service endpoint.

Sharma is silent with regard to a WSDL document having or containing functionality. Thus, the WSDL document which describes a "service endpoint" as described by Sharma is not the same as a "Web service implementation having abstract design-time functionality therein," as claimed by Applicants.

Even if, for the sake of argument, Sharma's WSDL document contained functionality capable of being "execute[d] ... on the application server" as Applicants recite, Sharma does not disclose that the WSDL document contains functionality that is "independent of runtime requirements of the application server," as taught and claimed by Applicants.

Moreover, Applicants recite in new claim 35, "**receiving** a Web service archive" and "**unpacking** ... the Web service archive," whereas Sharma discloses "**packag[ing]**" an endpoint class" into a WAR file at step 325 of Figure 3. Receiving and unpacking are at opposite ends of a spectrum (e.g. occurring later) than the mechanisms disclosed by Sharma for packaging the WAR archive file.

Because Sharma focuses on events (e.g., packaging archive files) that occur upstream from the events taught and claimed by Applicants (e.g., receiving and unpacking archive files), the mechanisms disclosed by Sharma do not overlap with the claims of Applicants in any meaningful way. Stated differently, Sharma is attempting to solve a different problem than Applicants.

In accordance with the preceding discussion, Applicants respectfully submit Sharma fails

to disclose at least one limitation that Applicants recite in new independent claim 35. The Office

Action concedes that "Bernhard does not expressly teach the Web service archive … including a

Web service implementation," and thus, Bernhard does not cure the deficiency of Sharma.

Accordingly, Applicants respectfully submit that new independent claim 35 is patentable

over the combination of Sharma and Bernhard, whether considered alone or in combination, and

further submit that new independent claims 43 and 51, which recite similar limitations, as well as

those claims depending on independent claims 35, 43, and 51, are patentable over the references

and in condition for allowance.

Thus, Applicants respectfully request the Examiner to withdraw the rejection to now

canceled claims 1-34 and allow new claims 35-58 presented herein.

New Claims 35-58:

As discussed above with regard to the rejection under 35 U.S.C. § 103, Applicants

respectfully submit that new claims 35-58 are patentable over the prior art of record and in

condition for allowance. New claims 35-58 find support in the specification as originally filed

and in the original claims submitted with the application.

CONCLUSION

Given the above amendments and accompanying remarks, all claims pending in the application are in condition for allowance. If the undersigned attorney has overlooked subject matter in any of the cited references that is relevant to allowance of the claims, the Examiner is requested to specifically point out where such subject matter may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (503) 439-8778.

Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully submitted,

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